

REMARKS

Rejections under 35 U.S.C. § 102

Claims 53, 59, 66 and 71 were rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Pat. No. 5,684,071 issued to Mogami et al. (hereinafter '071). Applicants respectfully traverse this rejection for the reasons stated below.

The examiner maintains that '071 discloses a polyester composition that includes barbituric acid and its derivatives and identifies column 3, line 50 through column 4, line 35 of the '071 patent specifically. Applicants respectfully disagree that the '071 patent discloses barbituric acid and its derivatives. Applicants further submit that the '071 patent does not teach the presently claimed invention of a polyester compound having at least one cyclic compound with an active methylene capable of reacting with acetaldehyde.

The '071 patent teaches in column 3, lines 50-55 that the nitrogen-containing compounds are five and six membered heterocyclic compounds and further teaches that the six-membered heterocyclic compounds are selected from oxazine, thiazine, pyridazine, pyrimidine, pyrazine, triazine, tetrazine and their derivatives. None of these compounds include barbituric acid.

Referring to column 4, lines 1-35 of the '071 patent, the nitrogen-containing compounds of Formula II at first glance would suggest the presently claimed specie. However, Applicants submit that this structure is incorrectly represented; specifically, the "C-R⁵" of Formula II should be --N-R⁵--. The reasons to support that Formula II is incorrectly represented are:

- 1) Column 4, lines 20-35 specifies the various moieties represented by R⁴, R⁵, and R⁶ are hydrogen, amino, aryl or a hydroxyalkyl group having 1-3 carbons. The problem with the structure of Formula II is the carbon having the R⁵group is a trivalent carbon, which does not exist. With respect to chemical representation, as understood by those skilled in the art, when such structures indicate their appropriate atomic configuration (i.e., when the carbons, nitrogens, halides, etc are clearly indicated), then the appropriate

bonds and valences are also represented. For example, referring to Formula I of the '071 patent, it is clear that the carbons have 4 bonds and the nitrogens 3. Excepting the C-R⁵ designation in Formula II in the '071 patent, Formula II also follows this understood chemical representation. Additionally, the moieties represented by R⁴, R⁵, and R⁶ are single bonded moieties. Thus, the "C-R⁵" of Formula II should be --N-R⁵--.

- 2) For the sake of argument, even if one assumes the structure of Formula II is correct, which it is not as explained above, then one would have to assume that R⁵ is not a single hydrogen but a double hydrogen (but this too would require ignoring the R⁴ and R⁶ moieties specified in Formula II since they can be the same as R⁵ and they are single bonds to the nitrogen). In which case the representative compounds of Formula II as taught by the '071 patent would be incorrect, i.e., cyanuric acid, isocyanuric acid, etc., require the "C-R⁵" to be --N-R⁵--. Accordingly, either the structure of Formula II is incorrect or this part of the teaching of the '071 patent is clearly indefinite.

Lastly, the '071 patent does not teach the present invention since the '071 patent teaches that the thermoplastic is improved by incorporating an additive into the thermoplastic. The additive is a nitrogen containing compound discussed above that is further treated with a compound having at least two functional groups, such as an epoxy, acid anhydride, isocyanate, oxazoline or carbodiimido, see column 5, lines 54-67. This is clearly different from the present invention which does not require further functionalizing the nitrogen compound.

Accordingly, for the reasons presented above, Applicants respectfully submit that claims 53, 59, 66 and 71 are not anticipated by U.S. Pat. No. 5,684,071 and request the rejection be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 65-69 were rejected under 35 U.S.C. § 103 (a) as being obvious over Mogami et al. ('071) as applied above and further in view of Sargeant et al. (U.S.

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6,593,406) and Igrashi et al. (U.S. 4,837,115). Applicant respectfully traverses this rejection.

As noted above, the '071 patent teaches a thermoplastic resin having a five or six membered nitrogen containing compound, wherein the six membered nitrogen containing compound is selected from oxazine, thiazine, pyridazine, pyrimidine, pyrazine, triazine, tetrazine and their derivatives which is then functionalized by an additional compound having at least two functional groups. The '071 patent does not teach or suggest the presently claimed invention of a polyester compound having at least one cyclic compound with an active methylene capable of reacting with acetaldehyde.

Applicant submits that one skilled in the art would not derive the presently claimed invention by combining the teachings of '071 with the '406 patent and the '115 patent either alone or in combination.

The '406 patent discloses PET having UV light absorbing compounds and radical scavenging hindered amine light stabilizing compounds (HALS) but does not teach or suggest polyester compound having at least one cyclic compound with an active methylene capable of reacting with acetaldehyde. Accordingly the combination of the '071 and '406 patents would not suggest the presently claimed invention.

The '115 patent teaches incorporating into PET a polyamide having a specific terminal amino group concentration (0.05 to 50 millimoles per 100 grams of resin) or that the amino group containing compound must have a specific molecular weight to effectively reduce the acetaldehyde produced. Applicants submit that the '115 patent does not teach or suggest that any nitrogen containing compound can be used for reducing acetaldehyde and instead is very specific as to the amino group concentration, the polyamide molecular weight and clearly identifies those homopolyamides and copolyamids that are suitable for reducing acetaldehyde, which does not include the compounds utilized by Applicants. Accordingly the combination of the '071 patent and the '115 patent would not suggest the presently claimed invention.

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Nor does the combination of the '071 patent with the '406 and the '115 patents suggest the presently claimed invention since none of the cited patents teach or suggest using the compounds utilized by Applicants.

For the reasons above, Applicants submit that claims 65-69 are patentably distinguishable over U.S. 5,684,071 in view of U.S. 6,593,406 and U.S. 4,837,115. Applicants respectfully request that the 35 U.S.C. § 103 (a) rejection be withdrawn.

Accordingly, Applicants submit that claims 53, 59, 65-69 and 71 are patentably distinguishable over U.S. Pat. Nos. 5,684,071; 6,593,406; and 4,837,115 and respectfully request that the 35 U.S.C. §§ 102(b) and 103(a) rejections be withdrawn and the application be passed to allowance at the examiner's earliest convenience.

In summary, applicant believes the application to be in condition for allowance. Accordingly, the Examiner is respectfully requested to reconsider the rejection(s), enter the above amendment, remove all rejections, and pass the application to issuance.

Respectfully submitted,



Michael K. Carrier
Registration No. 42,391

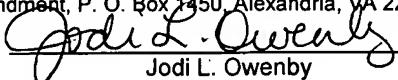
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Date

Eastman Chemical Company
P.O. Box 511
Kingsport, Tennessee 37662
Phone: (423) 229-4016
FAX: (423) 229-1239

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Jodi L. Owenby

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